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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/551,051	04/18/2000	Arup K. Basak		2218

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EXAMINER

SHOSHO, CALLIE E

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 07/02/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/551,051

Applicant(s)

BASAK ET AL.

Examiner

Callie E. Shosho

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 21 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claim 13 is rejected under 35 U.S.C. 102(a) as being anticipated by Hiraoka et al. (U.S. 5,980,623).

The rejection is adequately set forth in paragraph 3 of the office action mailed 8/21/01, Paper No. 8, and is incorporated here by reference.

3. Claim 13 is rejected under 35 U.S.C. 102(b) as being anticipated by either Fuller et al. (U.S. 5,017,644) or Malhotra et al. (U.S. 5,709,737).

The rejection is adequately set forth in paragraph 4 of the office action mailed 8/21/01, Paper No. 8, and is incorporated here by reference.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimatsu et al. (U.S. 5,913,971) in view of either Anton et al. (U.S. 6,005,023) or Ma et al. (U.S. 5,085,698),

Tsutsumi et al. (U.S. 5,852,074), Sano et al. (U.S. 5,324,349), and either Lin et al. (U.S. 5,531,818) or Nigam et al. (U.S. 5,693,127).

The rejection is adequately set forth in paragraph 5 of the office action mailed 12/8/00, Paper No. 5, and is incorporated here by reference.

6. Claims 1-10, 13-14, 17-18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noguchi et al. (U.S. 5,658,376) in view of either Anton et al. (U.S. 6,005,023) or Ma et al. (U.S. 5,085,698), Tsutsumi et al. (U.S. 5,852,074), Sano et al. (U.S. 5,324,349), and either Lin et al. (U.S. 5,531,818) or Nigam et al. (U.S. 5,693,127).

The rejection is adequately set forth in paragraph 6 of the office action mailed 12/8/00, Paper No. 5, and is incorporated here by reference.

7. Claims 1-5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sano et al. (U.S. 5,243,349) in view of either Anton et al. (U.S. 6,005,023) or Ma et al. (U.S. 5,085,698), and Tsutsumi et al. (U.S. 5,852,074).

The rejection is adequately set forth in paragraph 7 of the office action mailed 12/8/00, Paper No. 5, and is incorporated here by reference.

Response to Arguments

8. Applicants' arguments filed 12/21/01 have been fully considered but they are not persuasive.

Specifically, applicants argue that:

(a) Hiraoka et al., Fuller et al., and Malhotra et al. are not relevant references against the present claims given that each reference discloses ink which comprises dye not pigment as presently claimed.

(b) None of the cited references disclose unique equilibrium and kinetic phenomena associated with present invention.

(c) The carrier medium of Ma et al. and/or Anton et al. is completely different from that of the present invention.

(d) Tsutsumi et al. disclose ink that contains dye not pigment as required in the present claims.

(e) While conductivity of the ink formulated in the present invention may be within range of conductivity of prior art, it would not have been within the skill level of one of ordinary skill in the art to control conductivity of presently claimed ink.

With respect to argument (a), applicants argue that the ink of Hiraoka et al. contains dye solution while ink of present invention discloses pigment dispersion while inks of Fuller et al. and Malhotra et al. also contain dyes not pigments.

However, with respect to Malhotra et al., it is noted that col.22, lines 24-26 and col.24, lines 52-54 of Malhotra et al. disclose that the colorant is a dye or pigment.

Further, and more significantly, it is noted that Hiraoka et al., Fuller et al., and Malhotra et al. are each used against present claim 13 only and that there is no limitation in claim 13 that the ink contain pigment. Claim 13 only requires that the ink have certain conductivity, particle size, and surface tension. Given that Hiraoka et al., Fuller et al., and Malhotra et al. each disclose

ink comprising such conductivity, particle size, and surface tension, they each clearly meet all the limitations of claim 13 and thus, remain relevant references against this claim.

With argument (b), while applicants' arguments regarding neutralization and the equilibrium and kinetic phenomena present in the instant invention are helpful in order to better understand the present invention, the arguments are not persuasive because they are not commensurate in scope with the scope of the present claims. That is, there is no requirement in the present claims regarding equilibrium and kinetic phenomena or degree of neutralization. The present claims only require dispersion resin solubilized by ammonium hydroxide. This limitation is clearly met by the combination of either Fujimatsu et al., Noguchi et al., or Sano et al. with Ma et al. or Anton et al.

Applicants had previously argued that such combination discloses complete neutralization of dispersing agent while in the present invention, the dispersant is not completely neutralized for solubilization. However, as previously stated by examiner, there is no requirement in the present claims regarding the degree of neutralization of the dispersant and thus, the present claims are open to all degrees of neutralization including complete and partial.

With respect to argument (c), it is noted that the water-polyhydric alcohol carrier medium disclosed by either Anton et al. or Ma et al. is just one preferred embodiment. Col.8, lines 51-60 of Ma et al. disclose the use of water and ethanol, while col.2, lines 15-16 of Anton et al. refer to Ma et al. for solvents suitable for use in the ink, and thus also discloses the use of water-ethanol.

With respect to argument (d), note that Tsutsumi et al. is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, and in combination with the primary reference, discloses the presently claimed invention.

Applicants also argue that pigments are usually surface modified which results in no possibility of air entrapment resulting bubbles and that the equilibrium chemistry of anti-foaming agents and dispersion mechanism in ink vehicle are implemented in present invention so that pH, conductivity, and optical density are optimized. However, applicants have not provided any clear and convincing evidence to support this position. Further, there is no requirement in the claims that the pigment is surface modified. Further, with respect to Fujimatsu et al., it is noted that this reference already discloses the use of anti-foaming agent, just not the amount.

With respect to argument (e), given that combination of references as cited in paragraphs 5-6 above disclose ink as presently claimed and in light of teaching of Lin et al. or Nigam et al. of conductivities typically possess by ink jet ink, the examiner's position remains that it therefore would have been obvious to one of ordinary skill in the art, absent evidence to the contrary, to control the conductivity of the ink to values, including those presently claimed, and thereby arrive at the claimed invention.

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9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 703-305-0208. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Callie Shosho
6/28/02

CS

Vasu Jagannathan
VASU JAGANNATHAN
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